

# LEAK DETECTION DEVICE

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## Abstract of JP2003232826

**<P>PROBLEM TO BE SOLVED:** To provide a leak detection device capable of detecting precisely a leak by detecting accurately a resistance component leakage current.

**<P>SOLUTION:** The output of a zero-phase current transformer is amplified by an amplifier 1, and inputted into a switching element 3 after removing a high frequency component by a first low-pass filter 2. A high frequency component in a line voltage signal of a circuit is removed by a second low-pass filter 4 having the same characteristic as the first low-pass filter 2, and the phase of the output is changed by 90 degrees by a differential circuit 5, and a zero-cross point in an output waveform of the differential circuit 5 is detected by a zero-cross detection circuit 6, and a zero-cross signal is used as a switching signal of a switching element 3. The switching element 3 samples the output signal of the first low-pass filter 2 by the zero-cross signal, and adjusts a sampling value to have the magnitude of the leakage current.

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